

# PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT					
NATURE OF CONVEYANCE:	Release by Secured Party (Second Lien)					
<b>CONVEYING PARTY DATA</b>						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Name</th> <th style="width: 40%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Morgan Stanley Senior Funding, Inc.</td> <td>09/24/2012</td> </tr> </tbody> </table>		Name	Execution Date	Morgan Stanley Senior Funding, Inc.	09/24/2012	
Name	Execution Date					
Morgan Stanley Senior Funding, Inc.	09/24/2012					

## RECEIVING PARTY DATA

Name:	Alkermes, Inc.
Street Address:	852 Winter Street
City:	Waltham
State/Country:	MASSACHUSETTS
Postal Code:	02451

Name:	Alkermes Pharma Ireland Limited
Street Address:	Monskland
City:	Athlone Co. Westmeath
State/Country:	IRELAND

Name:	Alkermes Controlled Therapeutics Inc.
Street Address:	852 Winter Street
City:	Waltham
State/Country:	MASSACHUSETTS
Postal Code:	02451

## PROPERTY NUMBERS Total: 414

Property Type	Number
Patent Number:	5688801
Patent Number:	5965168
Patent Number:	6110921
Patent Number:	6368632
Patent Number:	6544559
Patent Number:	6803055

Patent Number:	7118763
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Patent Number:	5591123
Patent Number:	5358483
Patent Number:	5372579

#### CORRESPONDENCE DATA

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Correspondent Name: Daniel Ilan

Address Line 1: One Liberty Plaza c/o Cleary Gottlieb

Address Line 4: New York, NEW YORK 10006

NAME OF SUBMITTER:	Megan St. Ledger
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 39

source=Sept 16 PSA Release (with signatures)#page1.tif



## **TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS**

This Termination and Release of Security Interest in Patents (this “**Release**”) is granted on this 24th day of September, 2012, by Morgan Stanley Senior Funding, Inc. (“**Morgan Stanley**”), as collateral agent for the Secured Parties under the security agreements referenced below, in favor of Alkermes, Inc., a corporation organized under the laws of the Commonwealth of Pennsylvania, located at 852 Winter Street, Waltham, Massachusetts; Alkermes Pharma Ireland Limited, a private limited company organized under the laws of the Republic of Ireland (registered number 448848), located at Monksland, Athlone Co. Westmeath, Ireland; and Alkermes Controlled Therapeutics Inc., a corporation organized under the laws of the Commonwealth of Pennsylvania, located at 852 Winter Street, Waltham, Massachusetts (together, “**Alkermes**” or the “**Borrowers**”), with respect to the Patents (as defined below).

### **W I T N E S S E T H :**

WHEREAS, the Borrowers and Morgan Stanley are party to a Second Lien Guarantee and Collateral Agreement dated as of September 16, 2011, in favor of Morgan Stanley;

WHEREAS, pursuant to the Second Lien Guarantee and Collateral Agreement, on September 16, 2011, Morgan Stanley, as collateral agent, and Borrowers entered into a Patent Security Agreement, which was recorded with the U.S. Patent and Trademark Office (the “**USPTO**”) on September 29, 2011, at Reel/Frame 026994/0245 (the “**2011 Patent Security Agreement**”);

WHEREAS, pursuant to the 2011 Patent Security Agreement, Morgan Stanley received a security interest in all of Borrowers’ rights, titles and interests in the United States and throughout the world in the Patent Collateral (as this term is defined in the 2011 Patent Security Agreement), including, without limitation, those patents and patent applications set forth on Schedules A and B hereto; and

WHEREAS, Morgan Stanley desires to release any and all security interests, and any other lien, it has in the Patent Collateral to Alkermes.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Morgan Stanley hereby agrees as follows:

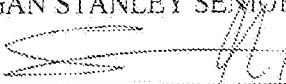
1. Morgan Stanley hereby releases, terminates and discharges, without representation, recourse or warranty whatsoever, each security interest in the Patent Collateral that was granted to Morgan Stanley under the 2011 Patent Security Agreement. Morgan Stanley acknowledges and agrees that the 2011 Patent Security Agreement has been terminated.

2. The parties hereto authorize and request that (i) with respect to the Patent Collateral listed on Schedule A, the Director of Patents and Trademarks of the United States of America and (ii) with respect to the Patent Collateral listed on Schedule B, the appropriate officer in the Republic of Ireland, record this Release against the Patent Collateral. Morgan Stanley agrees to perform, at the Borrowers' expense, all further acts and execute and deliver all further documents and/or instruments that may be reasonably necessary to carry out the provisions of this Release.
3. This Release shall be governed by and construed in accordance with the law of the State of New York.
4. This Release shall be binding upon Morgan Stanley's representatives, successors, assigns and transferees.

**[Remainder of Page Intentionally Blank]**

IN WITNESS WHEREOF, the undersigned has caused this Release to be executed by its duly authorized representatives as of the date first above written.

MORGAN STANLEY SENIOR FUNDING, INC.

By   
Name: Stephen B. King  
Title: VP  
Date: 8/24/13

STATE OF New York  
COUNTY OF New York

ss.:

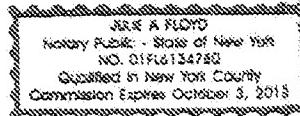
On this 24th day of September 2012, before me, the undersigned, a notary public in and for said state and county, personally appeared Stephen B. Karp, personally known to me (or proved to me on the basis of satisfactory evidence), to be the individual who executed the foregoing instrument on behalf of JP Morgan Stanley Services Funding Inc. of such company and acknowledged to me that the execution and delivery of said instrument was duly authorized by said company.

P Morgan  
Stanley  
Services  
Funding Inc.

Julie G. Hoyl

Notary Public

(Affix Seal Below)



**SCHEDULE A**

ASSIGNMENT REEL FRAME: 026994/0245

## Alkermes Patent Schedule

### September 2011

*Case #:* 000166.0051

*Title:* MICROENCAPSULATED 3-PIPERIDINYL-SUBSTITUTED 1,2-BENZISOXAZOLES AND 1,2-BENZISOTIAZOLES

*Owner:* ALKERMES, INC. and JANSSEN PHARMACEUTICA

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	01	DIV	Granted	08/403,432	14-Mar-1995	5,688,801	18-Nov-1997	18-Nov-2014
US	03	CON	Granted	09/005,549	12-Jan-1998	5,965,168	12-Oct-1999	19-Nov-2013
US	04	CON	Granted	09/252,486	18-Feb-1999	6,110,921	29-Aug-2000	19-Nov-2013
US	05	CON	Granted	09/578,908	26-May-2000	6,368,632	09-Apr-2002	19-Nov-2013
US	06	DIV	Granted	10/058,072	29-Jan-2002	6,544,559	08-Apr-2003	19-Nov-2013
US	07	DIV	Granted	10/359,226	06-Feb-2003	6,803,055	12-Oct-2004	19-Nov-2013
US	08	DIV	Granted	10/920,422	18-Aug-2004	7,118,763	10-Oct-2006	19-Nov-2013
US	11	REX	Granted	90/007,907	26-Jan-2006	5,688,801	18-Nov-1997	18-Nov-2014
US	12	REX	Granted	90/008,151	28-Aug-2006	6,368,632	23-Oct-2007	19-Nov-2013
US	13	REX	Granted	90/008,212	12-Sep-2006	6,110,921	04-Mar-2008	19-Nov-2013
US	14	REX	Granted	90/008,216	12-Sep-2006	5,965,168	22-Apr-2008	19-Nov-2013
US	16	CON	Granted	11/826,384	13-Jul-2007	7,547,452	16-Jun-2009	19-Nov-2013

## Alkermes Patent Schedule

September 2011

*Case #:* 000166.0053

*Title:* PREPARATION OF BIODEGRADABLE MICROPARTICLES CONTAINING A BIOLOGICALLY ACTIVE AGENT

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent#	Issue Date	Expiration Date
US	00	CON	Granted	08/725,439	03-Oct-1996	5,650,173	22-Jul-1997	19-Nov-2013
US	01	CON	Granted	08/729,277	10-Oct-1996	5,654,008	05-Aug-1997	19-Nov-2013

# Alkermes Patent Schedule

## September 2011

Case #: 000166.0063

Title: PREPARATION OF EXTENDED SHELF-LIFE BIODEGRADABLE, BIOCOMPATIBLE MICROPARTICLES CONTAINING A BIOLOGICALLY ACTIVE AGENT

Owner: ALKERMES, INC. and JANSSEN PHARMACEUTICA

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	02	ORD	Granted	08/850,679	02-May-1997	5,792,477	11-Aug-1998	02-May-2017
US	03*	CON	Granted	09/071,865	04-May-1998	5,916,598	29-Jun-1999	02-May-2017
US	04*	CON	Granted	09/263,098	05-Mar-1999	6,110,503	29-Aug-2000	02-May-2017
US	05*	CON	Granted	09/578,717	26-May-2000	6,290,983	18-Sep-2001	02-May-2017
US	06*	CON	Granted	09/920,862	03-Aug-2001	6,403,114	11-Jun-2002	02-May-2017
US	11*	REX	Granted	90/007,587	15-Jun-2005	6,110,503	02-Feb-2010	02-May-2017
US	12	REX	Granted	90/008,093	26-Jun-2006	5,792,477	13-Jul-2010	02-May-2017

NOTE: The assignment in cases noted (\*) denote Alkermes, Inc. ownership only. Other cases without note, including all ex-US patents and applications, are co-owned by Alkermes and Janssen Pharmaceutica.

# Alkermes Patent Schedule

## September 2011

*Case #:* 000166.0070

*Title:* METHOD FOR PREPARING MICROPARTICLES HAVING A SELECTED RELEASE PROFILE

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	01	ORD	Granted	09/223,276	30-Dec-1998	6,194,006	27-Feb-2001	30-Dec-2018
US	02	CON	Granted	09/722,335	28-Nov-2000	6,379,703	30-Apr-2002	30-Dec-2018
US	03	CON	Granted	10/059,115	31-Jan-2002	6,596,316	22-Jul-2003	30-Dec-2018

# Alkermes Patent Schedule

## September 2011

*Case #:* 000166.0073

*Title:* PREPARATION OF INJECTABLE SUSPENSIONS HAVING IMPROVED INJECTABILITY

*Owner:* ALKERMES PHARMA IRELAND LIMITED AND ALKERMES CONTROLLED THERAPEUTICS, INC.<sup>1</sup>

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	09/577,875	25-May-2000	6,495,164	17-Dec-2002	25-May-2020
US	01	CON	Granted	10/259,949	30-Sep-2002	6,667,061	23-Dec-2003	25-May-2020
US	02	DIV	Granted	10/681,142	09-Oct-2003	7,371,406	13-May-2008	25-May-2020
US	03	CON	Granted	11/826,994	19-Jul-2007	7,799,345	21-Sep-2010	25-May-2020
US	05	CON	Published	12/856,198	13-Aug-2010			

*Case #:* 000166.0075

*Title:* APPARATUS AND METHOD FOR PREPARING MICROPARTICLES

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	09/438,659	12-Nov-1999	6,331,317	18-Dec-2001	12-Nov-2019
US	01	CON	Granted	09/828,849	10-Apr-2001	6,395,304	28-May-2002	12-Nov-2019
US	02	CON	Granted	10/109,641	01-Apr-2002	6,537,586	25-Mar-2003	12-Nov-2019
US	03	CON	Granted	10/355,061	31-Jan-2003	6,713,090	30-Mar-2004	12-Nov-2019
US	04	CON	Granted	10/713,039	17-Nov-2003	6,861,016	01-Mar-2005	12-Nov-2019

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<sup>1</sup> Recordation in the relevant patent office(s) to reflect ownership interest held by Alkermes Pharma Ireland Limited will occur after Close.

# Alkermes Patent Schedule

## September 2011

**Case #:** 000166.0077

**Title:** PROCESS FOR ADJUSTING POLYMER MOLECULAR WEIGHT POLYMER MICROPARTICLES

**Owner:** ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	09/575,075	19-May-2000	6,264,987	24-Jul-2001	19-May-2020
US	01	CON	Granted	09/870,751	01-Jun-2001	6,379,704	30-Apr-2002	19-May-2020
US	02	CON	Granted	10/073,864	14-Feb-2002	6,534,092	18-Mar-2003	19-May-2020
US	00	ORD	Granted	09/671,426	27-Sep-2000	6,471,995	29-Oct-2002	27-Sep-2020
US	01	DIV	Granted	10/235,534	06-Sep-2002	6,830,737	14-Dec-2004	27-Sep-2020
US	02	CON	Granted	10/821,941	12-Apr-2004	6,884,372	26-Apr-2005	27-Sep-2020

**Case #:** 000166.0098

**Title:** APPARATUS AND METHOD FOR PREPARING MICROPARTICLES USING IN-LINE SOLVENT EXTRACTION

**Owner:** ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	09/438,656	12-Nov-1999	6,495,166	17-Dec-2002	12-Nov-2019
US	01	DIV	Granted	09/930,450	16-Aug-2001	6,540,393	01-Apr-2003	12-Nov-2019
US	02	CON	Granted	10/319,845	16-Dec-2002	6,705,757	16-Mar-2004	12-Nov-2019
US	03	CON	Granted	10/729,909	09-Dec-2003	6,939,033	06-Sep-2005	12-Nov-2019
US	04	CON	Granted	11/158,078	22-Jun-2005	7,300,671	27-Nov-2007	12-Nov-2019
US	05	CON	Granted	11/826,533	16-Jul-2007	7,510,730	31-Mar-2009	12-Nov-2019

**Case #:** 000166.0106

**Title:** ACID END GROUP POLY(D,L-LACTIDE-CO-GLYCOLIDE) COPOLYMERS WITH HIGH GLYCOLIDE CONTENT

**Owner:** ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	09/635,677	10-Aug-2000	6,362,308	26-Mar-2002	10-Aug-2020
US	01	DIV	Granted	10/060,235	01-Feb-2002	6,703,477	09-Mar-2004	10-Aug-2020
US	02	CON	Granted	10/724,107	01-Dec-2003	7,074,883	11-Jul-2006	10-Aug-2020

# Alkermes Patent Schedule

## September 2011

*Case #:* 000166.0108

*Title:* METHOD FOR IMPROVING MICROSPHERE FLOWABILITY CHARACTERISTICS

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	01	CIP	Granted	10/022,859	20-Dec-2001	7,247,319	24-Jul-2007	26-Jan-2023

*Case #:* 000166.0112

*Title:* RESIDUAL SOLVENT EXTRACTION METHOD AND MICROPARTICLES PRODUCED THEREBY

*Owner:* ALKERMES PHARMA IRELAND LIMITED<sup>2</sup>

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	09/942,631	31-Aug-2001	6,824,822	30-Nov-2004	31-Aug-2021
US	02	CON	Granted	11/312,371	21-Dec-2005	7,223,440	29-May-2007	31-Aug-2021
US	03	CON	Granted	11/785,638	19-Apr-2007	7,524,530	28-Apr-2009	31-Aug-2021
US	06	CON	Granted	12/382,637	20-Mar-2009	7,875,310	25-Jan-2011	31-Aug-2021
US	07	CON	Published	12/967,757	14-Dec-2010			

*Case #:* 000166.0118

*Title:* CROSSLINKED HYDROGEL COPOLYMERS

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	10/273,365	18-Oct-2002	6,800,663	05-Oct-2004	18-Oct-2022

*Case #:* 000166.0119

*Title:* METHOD AND APPARATUS FOR FILTERING AND DRYING A PRODUCT

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	00	ORD	Granted	10/304,058	26-Nov-2002	7,089,681	15-Aug-2006	26-Nov-2022

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<sup>2</sup> Recordation in the relevant patent office(s) to reflect ownership interest held by Alkermes Pharma Ireland Limited will occur after Close.

## Alkermes Patent Schedule

### September 2011

*Case #:* 000166.0127

*Title:* COACERVATION PROCESS

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	12/051,395	19-Mar-2008			

*Case #:* 000166.0129

*Title:* QUENCH LIQUIDS AND WASHING SYSTEMS FOR PRODUCTION MICROPARTICLES

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Pending	12/140,542	17-Jun-2008			

*Case #:* 000166.0138

*Title:* INJECTABLE FORMULATION OF ENTECAVIR FOR TREATMENT OF HEPATITIS B

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/529,705	31-Aug-2011			

# Alkermes Patent Schedule

## September 2011

Case #: 000166.2025

Title: MICROENCAPSULATION AND SUSTAINED RELEASE OF BIOLOGICALLY ACTIVE POLYPEPTIDES

Owner: ALKERMES PHARMA IRELAND LIMITED<sup>3</sup>

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	01	ORD	Granted	10/688,786	17-Oct-2003	7,164,005	16-Jan-2007	17-Oct-2023
US	02	ORD	Granted	10/688,059	17-Oct-2003	7,462,365	09-Dec-2008	06-Feb-2025
US	04	CON	Published	12/289,857	06-Nov-2008			

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<sup>3</sup> Recordation in the relevant patent office(s) to reflect ownership interest held by Alkermes Pharma Ireland Limited will occur after Close.

# Alkermes Patent Schedule

## September 2011

**Case #:** 000166.2056

**Title:** POLYMER-BASED SUSTAINED RELEASE DEVICE

**Owner:** ALKERMES PHARMA IRELAND LIMITED<sup>4</sup> and AMYLIN PHARMACEUTICALS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	01*	RCE	Granted	11/104,877	13-Apr-2005	7,456,254	25-Nov-2008	30-Jun-2025
US	03*	PCT	Pending	10/592,769	14-Sep-2006			15-Apr-2024
US	04	DIV	Granted	11/521,091	14-Sep-2006	7,563,871	21-Jul-2009	15-Apr-2024
US	09*	CON	Granted	11/826,535	16-Jul-2007	7,612,176	03-Nov-2009	13-Apr-2025
US	12	ORD	Published	11/578,712	23-Jan-2008			
US	14	CON	Published	12/483,871	12-Jun-2009			
US	15*	CON	Published	12/585,574	17-Sep-2009			
US	16*	CON	Published	12/713,036	25-Feb-2010			

**NOTE:** The assignment in cases noted (\*) denote Alkermes, Inc. as the assignee. All other US cases are assigned to both Alkermes, Inc. and Amylin Pharmaceuticals, Inc.

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<sup>4</sup> Recordation in the relevant patent office(s) to reflect ownership interest held by Alkermes Pharma Ireland Limited will occur after Close.

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3000

*Title:* Polymorphic Forms of Naltrexone

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Granted	10/860,608	03-Jun-2004	7,279,579	09-Oct-2007	07-May-2026
US	2	DIV	Published	11/860,677	25-Sep-2007			

*Case #:* 4000.3002

*Title:* Methods for Administering Active Agent to CYP3A4 Sensitive Patients

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Published	12/241,404	30-Sep-2008			

*Case #:* 4000.3003

*Title:* Aripiprazole, Olanzapine and Haloperidol Pamoate Salts

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	10/635,232	06-Aug-2003	6,987,111	17-Jan-2006	10-May-2024

**Alkermes Patent Schedule**  
**September 2011**

*Case #:* 4000.3005

*Title:* Methods for Administering Aripiprazole

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	CON	Pending	12/251,656	15-Oct-2008			

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3010

*Title:* Naltrexone Long Acting Formulations and Methods of Use

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Granted	11/083,167	17-Mar-2005	7,919,499	05-Apr-2011	15-Oct-2029
US	2	DIV	Published	13/037,713	01-Mar-2011			

# Alkermes Patent Schedule

September 2011

*Case #:* 4000.3022

*Title:* Selective Opioid Compounds

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	2	ORD	Published	12/371,334	13-Feb-2009			

*Case #:* 4000.3027

*Title:* Morphinan Derivatives with High Oral Bioavailability

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Published	12/727,784	19-Mar-2010			

*Case #:* 4000.3028

*Title:* Heterocyclic Compounds for the Treatment of Neurological and Psychological Disorders

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	2	ORD	Published	12/823,007	24-Jun-2010			

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3030

*Title:* Asenapine Prodrugs

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	12/978,298	23-Dec-2010			

*Case #:* 4000.3031

*Title:* Quaternary Ammonium Salt Prodrugs

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Published	12/978,178	23-Dec-2010			

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3033

*Title:* Prodrugs NH-Acidic Compounds

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1A	ORD	Published	12/823,102	24-Jun-2010			

*Case #:* 4000.3034

*Title:* Prodrugs Heteraromatic Compounds

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	12/978,273	23-Dec-2010			

*Case #:* 4000.3035

*Title:* Prodrugs for the Treatment of Schizophrenia and Bipolar Disease

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Published	12/978,274	23-Dec-2010			

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3036

*Title:* Diaryldiazepine Prodrugs for the Treatment of Neurological and Psychological Disorders

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Published	12/978,240	23-Dec-2010			

*Case #:* 4000.3038

*Title:* Morphinan Derivatives for the Treatment of Drug Overdose

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Published	12/903,462	13-Oct-2010			

*Case #:* 4000.3039

*Title:* Process for Synthesizing Oxidized Lactam Compounds

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	13/100,515	04-May-2011			

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3041

*Title:* Process for the Synthesis Substituted Morphinans

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	13/096,679	28-Apr-2011			

*Case #:* 4000.3042

*Title:* Prodrugs NH-Acidic Compounds: Carbonate, Carbamate and Phosphonate Derivatives

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	13/168,497	24-Jun-2011			

*Case #:* 4000.3043

*Title:* Methods for Treating Antipsychotic-Induced Weight Gain

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	1	ORD	Pending	13/215,718	23-Aug-2011			23-Aug-2031

*Case #:* 4000.3044

*Title:* Multi-API Loading Prodrugs

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/427,026	23-Dec-2010			23-Dec-2011

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3047

*Title:* Peripherally Acting Mu Opioid Antagonists

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/442,629	14-Feb-2011			14-Feb-2012

*Case #:* 4000.3048

*Title:* Process for the Synthesis of Quaternary Amine Compounds

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/472,016	05-Apr-2011			05-Apr-2012

*Case #:* 4000.3051

*Title:* Crystalline Salt Forms of an Opioid Modulator

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/495,203	09-Jun-2011			09-Jun-2012

# Alkermes Patent Schedule

## September 2011

*Case #:* 4000.3052

*Title:* Peripherally Acting Opioid Compounds

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/502,721	29-Jun-2011			

*Case #:* 4000.3054

*Title:* Prodrugs of Nucleoside Analogs

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		PRO	Pending	61/527,986	26-Aug-2011			

# Alkermes Patent Schedule

September 2011

*Case #:* 513352

*Title:* Formulations Having Improved Site Reactions

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	PRO		Pending	61/454,008	18-Mar-2011			18-Mar-2012

# Alkermes Patent Schedule

September 2011

**Case #:** 1733.1002

**Title:** Composition for Sustained Release Human Growth Hormone

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	4	CON	Granted	09/505,508	17-Feb-2000	6,500,448	31-Dec-2002	02-Dec-2012

**Case #:** 1733.1004

**Title:** Composition and Method for the Controlled Release Metal Cation-Stabilized Interferon

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	08/279,784	25-Jul-1994	5,711,968	27-Jan-1998	27-Jan-2015
US	001	CON	Granted	08/765,558	07-Mar-1997	6,165,508	26-Dec-2000	26-Dec-2017
US	014	CON	Granted	10/092,365	06-Mar-2002	6,780,434	24-Aug-2004	25-Jul-2014

**Case #:** 1733.1009

**Title:** Production Scale Method Forming Microparticles

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	08/443,726	18-May-1995	5,922,253	13-Jul-1999	13-Jul-2016
US	021	CON	Granted	09/305,413	05-May-1999	6,153,129	28-Nov-2000	18-May-2015
US	022	CON	Granted	09/587,821	06-Jun-2000	6,358,443	19-Mar-2002	18-May-2015
US	023	CON	Granted <sup>5</sup>	10/006,991	06-Dec-2001	6,726,860	27-Apr-2004	13-Jul-2015
US	041	CON	Granted	10/784,474	23-Feb-2004	7,037,450	02-May-2006	06-Dec-2021

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<sup>5</sup> Note: The Company has decided to abandon this registration

# Alkermes Patent Schedule

## September 2011

*Case #:* 1733.1015

*Title:* Method for Fabricating Polymer-Based Controlled-Release Devices

*Owner:* ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	08/649,128	14-May-1996	5,817,343	06-Oct-1998	14-May-2016
US	007	CIP	Granted	08/779,777	07-Jan-1997	6,183,781	06-Feb-2001	14-May-2016

*Case #:* 1733.1016

*Title:* Composition and Method Using Solid-Phase Particles for Sustained In Vivo Release a Biologically Active Agent

*Owner:* ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	001	ORD	Granted	08/705,197	29-Aug-1996	5,916,597	29-Jun-1999	29-Aug-2016

*Case #:* 1733.1018

*Title:* Device for the Sustained Release Aggregation-Stabilized Biologically Active Agent

*Owner:* ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	008	CON	Granted	08/934,830	22-Sep-1997	6,514,533	04-Feb-2003	31-Aug-2015
US	011	CON	Granted	09/820,587	29-Mar-2001	6,555,525	29-Apr-2003	31-Aug-2015

*Case #:* 1733.1044

*Title:* A Method for Purifying Human Growth Hormone

*Owner:* ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	09/260,362	01-Mar-1999	6,451,347	17-Sep-2002	01-Mar-2019

# Alkermes Patent Schedule

## September 2011

**Case #:** 1733.1045

**Title:** Method for Producing Submicron Particles a Labile Agent and Use There

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	09/321,091	28-May-1999	6,444,223	03-Sep-2002	28-May-2019
US	007	CON	Granted	10/200,057	18-Jul-2002	6,713,087	30-Mar-2004	28-May-2019

**Case #:** 1733.1051

**Title:** Method for Producing Sub-Micron Particles Biologically Active Agents and Uses There

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	09/422,751	21-Oct-1999	6,284,283	04-Sep-2001	21-Oct-2019
US	003	CON	Granted	09/898,524	03-Jul-2001	6,428,815	06-Aug-2002	21-Oct-2019

**Case #:** 1733.1055

**Title:** Microencapsulation and Sustained Release Biologically Active Acid-Stable or Free Sulphydryl-Containing Proteins

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	09/501,934	10-Feb-2000	6,465,425	15-Oct-2002	10-Feb-2020

**Case #:** 1733.1056

**Title:** Process for the Preparation of Polymer-Based Sustained Release Compositions

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC. AND ALKERMES PHARMA IRELAND LIMITED<sup>6</sup>

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	001	CON	Granted	09/801,272	07-Mar-2001	6,479,065	12-Nov-2002	10-Aug-2020

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<sup>6</sup> Recordation in the relevant patent office(s) to reflect ownership interest held by Alkermes Pharma Ireland Limited will occur after Close.

# Alkermes Patent Schedule

September 2011

**Case #:** 1733.1057

**Title:** Method and Apparatus for Uniform Sorbate Equilibration Solid Samples

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		ORD	Granted	09/507,238	18-Feb-2000	6,499,361	31-Dec-2002	18-Feb-2020

**Case #:** 1733.1062

**Title:** Methods and Compositions for the Targeted Delivery of Biologically Active Agents

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	003	CON	Granted	10/342,448	14-Jan-2003	7,097,857	29-Aug-2006	20-Mar-2021

**Case #:** 1733.1068

**Title:** Method of Modifying the Release Profile Sustained Release Compositions

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	008	CON	Granted	10/758,717	16-Jan-2004	7,074,432	11-Jul-2006	25-Mar-2023

**Case #:** 1733.1070

**Title:** Process for Producing Small Particles Biologically Active Molecules

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	017	FWC	Granted	08/006,682	21-Jan-1993	6,569,458	27-May-2003	27-May-2020

# Alkermes Patent Schedule

## September 2011

**Case #:** 1733.2012

**Title:** Method of Preparing Sustained Release Microparticles

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US	001	ORD	Granted	10/762,220	21-Jan-2004	7,658,998	09-Feb-2010	13-Oct-2027

**Case #:** 1733.2040

**Title:** Method of Modifying the Release Profile Sustained Release Compositions

**Owner:** ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		CON	Pending <sup>7</sup>	11/826,694	17-July-2007			

**Case #:** 0947.1044-031

**Title:** Increasing Blood-Brain Barrier Permeability with Permeabilizer Peptides

**Owner:** ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
US		DIV	Granted	08/121,058	13-Sep-1993	5,506,206	09-Apr-1996	09-Apr-2013

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<sup>7</sup> Note: The Company has decided to abandon this application

Country	Status	Patent Number	Application Number	Publication Number	Filing Date	Issue / Grant Date	Normal Expiry Date	Owner	Short Title / Subject Matter
USA	Granted	5260478	07/986,646		08-Dec-1992	09-Nov-1993	08-Dec-2012	Alkermes Pharma Ireland Limited	IODINATED AROXY CARBOXAMIDES
USA	Granted	5264610	08/038,371		29-Mar-1993	23-Nov-1993	29-Mar-2013	Alkermes Pharma Ireland Limited	IODINATED AROMATIC PROPANEDIATES
USA	Granted	5328404	08/148,112		04-Nov-1992	12-Jul-1994	29-Mar-2013	Alkermes Pharma Ireland Limited	METHOD OF X-RAY IMAGING USING IODINATED AROMATIC PROPANEDIATES
USA	Granted	5328262	07/987,904		04-Dec-1992	29-Mar-1994	04-Dec-2012	Alkermes Pharma Ireland Limited	USE OF IONIC CLOUD POINT MODIFIERS TO PREVENT PARTICLE AGGREGATION DURING STERILIZATION
USA	Granted	5302401	07/987,879		09-Dec-1992	12-Apr-1994	09-Dec-2012	Alkermes Pharma Ireland Limited	METHOD TO REDUCE PARTICLE SIZE GROWTH DURING LIOPHILIZATION
USA	Granted	5451398	08/207,533		07-Mar-1994	19-Sep-1995	19-Sep-2012	Alkermes Pharma Ireland Limited	X-RAY CONTRAST COMPOSITIONS USEFUL IN MEDICAL IMAGING
USA	Granted	5328279	07/990,987		16-Dec-1992	21-Jun-1994	16-Dec-2012	Alkermes Pharma Ireland Limited	IODINATED AROXY ESTERS
USA	Granted	5464433	08/261,794		20-Jun-1994	14-Nov-1995	16-Dec-2012	Alkermes Pharma Ireland Limited	IODINATED AROXY ESTERS
USA	Granted	5328252	07/991,199		17-Dec-1992	05-Jul-1994	17-Dec-2012	Alkermes Pharma Ireland Limited	FORMULATIONS FOR NANOPARTICULATE X-RAY BLOOD POOL CONTRAST AGENTS USING HIGH
USA	Granted	5447110	08/242,492		13-May-1994	05-Sep-1995	05-Sep-2012	Alkermes Pharma Ireland Limited	METHOD OF MAKING NANOPARTICULATE X-RAY BLOOD POOL CONTRAST AGENTS USING HIGH
USA	Granted	5307039	07/985,415		04-Dec-1992	19-Jul-1994	04-Dec-2012	Alkermes Pharma Ireland Limited	IODINATED BENZOYL ACETALS AND KETALS FOR X-RAY IMAGING
USA	Granted	5470583	08/240,509		10-May-1994	26-Nov-1995	11-Dec-2012	Alkermes Pharma Ireland Limited	METHOD OF PREPARING NANOPARTICLE COMPOSITIONS CONTAINING CHARGED PHOSPHOLIPIDS TO
USA	Granted	5346688	07/991,640				16-Dec-2012	Alkermes Pharma Ireland Limited	NCD - Diagnostic Imaging
USA	Granted	5347397	07/985,424		04-Dec-1992	13-Sep-1994	04-Dec-2012	Alkermes Pharma Ireland Limited	USE OF NON-IONIC CLOUD POINT MODIFIERS TO MINIMIZE NANOPARTICLE AGGREGATION DURING
USA	Granted	5325159	07/991,639		16-Dec-1992	04-Oct-1994	16-Dec-2012	Alkermes Pharma Ireland Limited	USE OF PURIFIED SURFACE MODIFIERS TO PREVENT PARTICLE AGGREGATION DURING STERILIZATION
USA	Granted	5384107	08/285,536		03-Aug-1994	24-Jan-1995	14-Dec-2012	Alkermes Pharma Ireland Limited	IODINATED AROMATIC COMPOUNDS
USA	Granted	5494638	08/365,267		29-Dec-1994	27-Feb-1996	27-Feb-2013	Alkermes Pharma Ireland Limited	SURFACE MODIFIED ANTICANCER NANOPARTICLES
USA	Granted	5401492	07/981,698		17-Dec-1992	26-Mar-1995	17-Dec-2012	Alkermes Pharma Ireland Limited	WATER INSOLUBLE NON-MAGNETIC MANGANESE PARTICLES AS MAGNETIC RESONANCE CONTRACT
USA	Granted	5428224	07/990,874		15-Dec-1992	04-Jul-1995	15-Dec-2012	Alkermes Pharma Ireland Limited	USE OF TYLOXAPOL AS A NANOPARTICLE STABILIZER AND DISPERSANT
USA	Granted	5464440	08/367,407		30-Dec-1994	14-Nov-1995	30-Dec-2014	Alkermes Pharma Ireland Limited	FORMULATIONS OF ORAL GASTROINTESTINAL DIAGNOSTIC X-RAY CONTRAST AGENTS IN COMBINATION
USA	Granted	5464352	08/624,145		22-Aug-1995	01-Jul-1997	22-Aug-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE DIAGNOSTIC MIXED CARBONIC ANHYDRIDES AS X-RAY CONTRAST AGENTS FOR
USA	Granted	5472683	08/401,570		09-Mar-1995	05-Dec-1995	09-Mar-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE DIAGNOSTIC MIXED CARBAMIC ANHYDRIDES AS X-RAY CONTRAST AGENTS FOR
USA	Granted	5573749	08/401,397		09-Mar-1995	12-Nov-1996	09-Mar-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE DIAGNOSTIC MIXED CARBOXYLIC ANHYDRIDES AS X-RAY CONTRAST AGENTS FOR
USA	Granted	5483133	08/209,181		10-Mar-1994	30-Jan-1998	10-Mar-2014	Alkermes Pharma Ireland Limited	IODINATED AROXY KETONES
USA	Granted	5502024	08/388,788				10-Feb-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE DIAGNOSTIC DIMERS AS X-RAY CONTRAST AGENTS FOR BLOOD POOL AND
USA	Granted	5503723	08/385,531		08-Feb-1995	02-Apr-1996	08-Feb-2015	Alkermes Pharma Ireland Limited	ISOLATION OF ULTRA SMALL PARTICLES
USA	Granted	5510118	08/388,692		14-Feb-1995	23-Apr-1996	14-Feb-2015	Alkermes Pharma Ireland Limited	PROCESS OF PREPARING THERAPEUTIC COMPOSITIONS CONTAINING NANOPARTICLES
USA	Granted	5518187	08/180,827		12-Jan-1994	21-May-1998	12-Jan-2014	Alkermes Pharma Ireland Limited	METHOD OF GRINDING PHARMACEUTICAL SUBSTANCES
USA	Granted	5518736	08/385,614		09-Feb-1995	21-May-1998	09-Feb-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE NSAID COMPOSITIONS
USA	Granted	5521026	08/440,794		15-May-1995	28-May-1996	15-May-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE IODOPAMIDE DERIVATIVES FOR USE AS X-RAY CONTRAST AGENTS
USA	Granted	5525228	08/265,550		24-Jun-1994	11-Jun-1996	24-Jun-2014	Alkermes Pharma Ireland Limited	NANOPARTICULATE DIAGNOSTIC DIATRIAZOXY ESTER X-RAY CONTRAST AGENTS FOR BLOOD POOL AND
USA	Granted	5542420	08/386,028		09-Feb-1995	09-Jul-1996	09-Feb-2015	Alkermes Pharma Ireland Limited	METHOD OF PREPARING STABLE DRUG NANOPARTICLES
USA	Granted	5543133	08/388,199		14-Feb-1995	06-Aug-1996	14-Feb-2015	Alkermes Pharma Ireland Limited	PROCESS OF PREPARING X-RAY CONTRAST COMPOSITIONS CONTAINING NANOPARTICLES
USA	Granted	5571536	08/384,057		06-Feb-1995	05-Nov-1996	06-Feb-2015	Alkermes Pharma Ireland Limited	FORMULATIONS OF COMPOUNDS AS NANOPARTICULATE DISPERSIONS IN DIGESTIBLE OILS OR FATTY
USA	Granted	5560931	08/388,688		14-Feb-1995	01-Oct-1996	14-Feb-2015	Alkermes Pharma Ireland Limited	FORMULATIONS OF COMPOUNDS AS NANOPARTICULATE DISPERSIONS IN DIGESTIBLE OILS OR FATTY
USA	Granted	5560932	08/370,955		10-Jan-1995	01-Oct-1996	10-Jan-2015	Alkermes Pharma Ireland Limited	MICROPRECIPITATION OF NANOPARTICULATE PHARMACEUTICAL AGENTS
USA	Granted	5561181	08/393,972		24-Feb-1995	15-Oct-1996	24-Feb-2015	Alkermes Pharma Ireland Limited	POLYALKYLENE 3,0,0K COPOLYMERS AS SURFACE MODIFIERS FOR NANOPARTICLES
USA	Granted	5570194	08/727,693		08-Oct-1995	06-Jan-1998	24-Feb-2015	Alkermes Pharma Ireland Limited	POLYALKYLENE 3,0,0K COPOLYMERS AS SURFACE MODIFIERS FOR NANOPARTICLES
USA	Granted	5569446	08/378,022		24-Jan-1995	29-Oct-1996	24-Jan-2015	Alkermes Pharma Ireland Limited	SULFATED NONIONIC 3,0,0K COPOLYMER SURFACTANTS AS STABILIZER COATINGS FOR NANOPARTICLE
USA	Granted	5573750	08/447,138		22-May-1995	12-Nov-1996	22-May-2015	Alkermes Pharma Ireland Limited	DIAGNOSTIC X-RAY CONTRAST AGENTS
USA	Granted	5573783	08/387,651		13-Feb-1995	12-Nov-1996	13-Feb-2015	Alkermes Pharma Ireland Limited	REDISPERSIBLE NANOPARTICULATE FILM MATRICES WITH PROTECTIVE OVERCOATS
USA	Granted	5580579	08/386,878		15-Feb-1995	03-Dec-1996	15-Feb-2015	Alkermes Pharma Ireland Limited	SITE-SPECIFIC ADHESION WITHIN THE GI TRACT USING NANOPARTICLES STABILIZED BY HIGH
USA	Granted	5585108	08/369,518		30-Dec-1995	17-Dec-1996	30-Dec-2014	Alkermes Pharma Ireland Limited	FORMULATIONS OF ORAL GASTROINTESTINAL THERAPEUTIC AGENTS IN COMBINATION WITH
USA	Granted	5587143	08/267,692		26-Jun-1994	24-Dec-1996	26-Jun-2014	Alkermes Pharma Ireland Limited	BUTYLENE OXIDE-ETHYLE OXIDE BLOCK COPOLYMER SURFACTANTS AS STABILIZER COATINGS FOR
USA	GRANTED	5591456	08/386,790		10-Feb-1995	07-Jan-1997	10-Feb-2015	Alkermes Pharma Ireland Limited	MILLED NAPROXEN WITH HYDROXYPROPYL CELLULOSE AS A DISPERSION STABILIZER
USA	Granted	5593627	08/388,027		09-Feb-1995	15-Jan-1997	09-Feb-2015	Alkermes Pharma Ireland Limited	NOVEL BARIUM SALT FORMULATIONS STABILIZED BY NON-IONIC AND ANIONIC STABILIZERS
USA	Granted	5603916	08/447,132		22-May-1995	18-Feb-1997	22-May-2015	Alkermes Pharma Ireland Limited	3-BIS AL-KANOYL A-2-6-TRIODOPHENYL ESTERS
USA	Granted	5622938	08/444,796		19-May-1995	22-Apr-1997	09-Feb-2015	Alkermes Pharma Ireland Limited	SUGAR BASE SURFACTANT FOR NANOCRYSTALS
USA	Granted	5628381	08/366,841		30-Dec-1994	13-May-1997	30-Dec-2014	Alkermes Pharma Ireland Limited	FORMULATIONS OF ORAL GASTROINTESTINAL DIAGNOSTIC X-RAY CONTRAST AGENTS AND ORA-
USA	Granted	6,432,381 B2	08/815,346	US 2001-000617 A1	11-Mar-1997	13-Aug-2002	30-Dec-2014	Alkermes Pharma Ireland Limited	METHODS FOR TARGETING DRUG DELIVERY TO THE UPPER AND/OR LOWER GASTROINTESTINAL TRACT
USA	Published	10/175,651	US 2003-0164045 A1		21-Jun-2002	30-Dec-2014	Alkermes Pharma Ireland Limited	METHODS FOR TARGETING DRUG DELIVERY TO THE UPPER AND/OR LOWER GASTROINTESTINAL TRACT	
USA	Granted	5626288	08/370,936		10-Jan-1995	02-Sep-1997	10-Jan-2015	Alkermes Pharma Ireland Limited	MICROPRECIPITATION OF NANOPARTICULATE PHARMACEUTICAL AGENTS
USA	Granted	5665331	08/370,938		10-Jan-1995	02-Sep-1997	10-Jan-2015	Alkermes Pharma Ireland Limited	COPRECIPITATION OF NANOPARTICULATE PHARMACEUTICAL AGENTS WITH CRYSTAL GROWTH
USA	Granted	5681196	08/677,709		10-Jul-1996	16-Sep-1997	10-Jul-2016	Alkermes Pharma Ireland Limited	NOVEL 3-AMINO-TRIODOBENZYL ESTERS AS X-RAY CONTRAST AGENTS
USA	Granted	5670136	08/586,363		16-Jan-1996	23-Sep-1997	23-Sep-2014	Alkermes Pharma Ireland Limited	2,4,6-TRIO-5-SUBSTITUTED AMINO ISOPHTHALATE ESTERS USEFUL AS X-RAY CONTRAST AGENTS FOR
USA	GRANTED	5716422	08/370,928		10-Jan-1995	10-Feb-1998	10-Feb-2015	Alkermes Pharma Ireland Limited	MICROPRECIPITATION OF NANOPARTICULATE PHARMACEUTICAL AGENTS USING SURFACE ACTIVE
USA	GRANTED	5718388	08/249,787		25-May-1994	17-Feb-1998	17-Feb-2015	Alkermes Pharma Ireland Limited	CONTINUOUS METHOD OF GRINDING PHARMACEUTICAL SUBSTANCES
USA	Granted	5718919	08/393,648		25-May-1994	17-Feb-1998	17-Feb-2015	Alkermes Pharma Ireland Limited	NANOPARTICLES CONTAINING THE R(+)-ENANTIOMER OF ISUPROFEN
USA	Granted	5747001	08/393,573		24-Feb-1995	05-May-1998	05-May-2015	Alkermes Pharma Ireland Limited	AEROSOLS CONTAINING SECLOMETHAZONE NANOPARTICLE DISPERSIONS
USA	Granted	5834025	08/696,754		14-Aug-1995	10-Nov-1998	14-Aug-2016	Alkermes Pharma Ireland Limited	REDUCTION OF INTRAVENOUSLY ADMINISTERED NANOPARTICULATE FORMULATION-INDUCED ADVERSE
USA	Granted	RE41,884 E	12/027,100		06-Feb-2008	26-Oct-2010	14-Aug-2016	Alkermes Pharma Ireland Limited	REDUCTION OF INTRAVENOUSLY ADMINISTERED NANOPARTICULATE FORMULATION-INDUCED ADVERSE
USA	Granted	5826299	08/491,539		15-Jun-1995	26-Jan-1999	25-May-2014	Alkermes Pharma Ireland Limited	METHOD OF GRINDING PHARMACEUTICAL SUBSTANCES
USA	Granted	5936030	08/636,819		14-Aug-1997	10-Aug-1998	10-Aug-2016	Alkermes Pharma Ireland Limited	POLYETHER COPOLYMERS AND A PROCESS FOR PREPARING THEM
USA	GRANTED	6045629	08/890,602		06-Jul-1997	04-Apr-2000	13-Feb-2017	Alkermes Pharma Ireland Limited	NANOCRYSTALLINE FORMULATIONS OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) PROTEASE INHIBITORS
USA	Granted	6068558	08/225,493		06-Jan-1999	30-May-2000	09-Jul-2017	Alkermes Pharma Ireland Limited	METHODS OF MAKING NANOCRYSTALLINE FORMULATIONS OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) PROTEASE INHIBITORS
USA	Granted	6221001	08/225,498		06-Jan-1999	24-Apr-2001	13-Feb-2017	Alkermes Pharma Ireland Limited	METHODS OF TREATING MAMMALS USING NANOCRYSTALLINE FORMULATIONS OF HUMAN
USA	GRANTED	6153225	09/154,422		13-Aug-1998	28-Nov-2000	13-Aug-2018	Alkermes Pharma Ireland Limited	INACTE-3-E FORMULATIONS OF NANOPARTICULATE NAPROXEN
USA	Granted	6165506	09/148,332		04-Sep-1998	28-Dec-2000	04-Sep-2018	Alkermes Pharma Ireland Limited	NEW SOLID DOSE FORM OF NANOPARTICULATE NAPROXEN
USA	Granted	6264242	09/948,216		05-Oct-1997	24-Jul-2001	24-Feb-2015	Alkermes Pharma Ireland Limited	NEUBLIZED AEROSOLS CONTAINING NANOPARTICULATE DISPERSIONS
USA	Pending	09/577,489			22-May-2000	24-Feb-2015	Alkermes Pharma Ireland Limited	METHODS OF ADMINISTRATING LIQUID DROPLET AEROSOLS OF NANOPARTICULATE DRUGS	
USA	APPEAL	12/081,670	US 2008-0274044 A1	18-Apr-2008		24-Feb-2015	Alkermes Pharma Ireland Limited	METHODS OF ADMINISTRATING LIQUID DROPLET AEROSOLS OF NANOPARTICULATE DRUGS	
USA	Granted	7,521,088 B2	09/190,138	US 2002-0102294 A1	12-Nov-1998	21-Apr-2009	12-Apr-2022	Alkermes Pharma Ireland Limited	DRY POWDER AEROSOLS OF NANOPARTICULATE DRUGS
USA	Granted	6811767	09/597,738	US 2009-0181100 A1	19-Jun-2000	02-Nov-2004	12-Nov-2018	Alkermes Pharma Ireland Limited	LIQUID DROPLET AEROSOLS OF NANOPARTICULATE DRUGS
USA	Published	12/820,431	US 2009-0181100 A1	19-Jun-2000	12-Nov-2018	12-Nov-2018	Alkermes Pharma Ireland Limited	LIQUID DROPLET AEROSOLS OF NANOPARTICULATE DRUGS	
USA	GRANTED	6270806	09/261,151		03-Mar-1999	07-Aug-2001	03-Mar-2019	Alkermes Pharma Ireland Limited	USE OF PEG-DERIVATIZED LIPLIDS AS SURFACE STABILIZERS FOR NANOPARTICULATE COMPOSITIONS
USA	GRANTED	6267989	09/263,834		06-Mar-1999	31-Jul-2001	06-Mar-2019	Alkermes Pharma Ireland Limited	METHODS FOR PREVENTING CRYSTAL GROWTH AND PARTICLE AGGREGATION IN NANOPARTICULATE
USA	Granted	6686504	09/392,557		09-Sep-1998	02-Dec-2003	09-Sep-2019	Alkermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS COMPRISING AMORPHOUS CYCLOCROPINE AND METHODS OF
USA	Published	09/337,675	US 2002-0012675 A1	22-Jun-1999		01-Oct-2018	Alkermes Pharma Ireland Limited	CONTROLLED-RELEASE NANOPARTICULATE COMPOSITIONS	
USA	APPEAL	11/979,231	US 2008-0124393 A1	31-Oct-2007		01-Oct-2018	Alkermes Pharma Ireland Limited	CONTROLLED-RELEASE NANOPARTICULATE CLOZAPINE COMPOSITIONS	
USA	Published	12/483,188	US 2009-0297619 A1	11-Jun-2009		22-Jun-2015	Alkermes Pharma Ireland Limited	NANOPARTICULATE ANTI-CONVULSANT AND IMMUNOSUPPRESSIVE COMPOSITIONS	

Country	Status	Patent Number	Application Number	Publication Number	Filing Date	Issue / Grant Date	Normal Expiry Date	Owner	Short Title / Subject Matter
USA	Pending	13/102,796			06-May-2001	01-Oct-2018	Akermes Pharma Ireland Limited		CONTROLLED-RELEASE NANOPARTICULATE CLOZAPINE COMPOSITIONS
USA	Granted	6428614	09/414,159	US 2002-0068092 A1	06-Oct-1999	06-Aug-2002	03-Oct-2019	Akermes Pharma Ireland Limited	BIOADHESIVE NANOPARTICULATE COMPOSITIONS HAVING CATIONIC SURFACE STABILIZERS
USA	Granted	7288267	10/004,808	US 2003-0108611 A1	06-Oct-1999	30-Oct-2007	23-May-2021	Akermes Pharma Ireland Limited	BIOADHESIVE NANOPARTICULATE COMPOSITIONS HAVING CATIONIC SURFACE STABILIZERS
USA	Granted	7880956	11/889,274	US 2008-0003295 A1	11-Sep-2007	14-Dec-2010	03-Oct-2019	Akermes Pharma Ireland Limited	BIOADHESIVE NANOPARTICULATE COMPOSITIONS HAVING CATIONIC SURFACE STABILIZERS
USA	Granted	6431476	09/583,693		31-May-2000	13-Aug-2002	26-Jul-2020	Akermes Pharma Ireland Limited	SMALL SCALE MILL AND METHOD THEREOF
USA	Granted	6745962	10/037,586	US 2002-0145062 A1	19-Oct-2001	06-Jun-2004	31-May-2020	Akermes Pharma Ireland Limited	SMALL SCALE MILL AND METHOD THEREOF
USA	Granted	6991191	10/833,145	US 2004-0251332 A1	25-Apr-2004	31-Jan-2008	30-Jun-2020	Akermes Pharma Ireland Limited	SMALL SCALE MILL AND METHOD THEREOF
USA	Granted	6319029	09/572,561		18-May-2000	13-Nov-2001	18-May-2020	Akermes Pharma Ireland Limited	RAPIDLY DISINTEGRATING SOLID ORAL DOSAGE FORM
USA	Published	10/667,470	US 2004-0057939 A1		23-Sep-2003	18-May-2020	Akermes Pharma Ireland Limited	RAPIDLY DISINTEGRATING SOLID ORAL DOSAGE FORM	
USA	Published	12/068,706	US 2008-0213271 A1		11-Feb-2008	18-May-2020	Akermes Pharma Ireland Limited	RAPIDLY DISINTEGRATING SOLID ORAL DOSAGE FORM	
USA	Granted	6375986	09/666,539		21-Sep-2000	23-Apr-2002	21-Sep-2020	Akermes Pharma Ireland Limited	SOLID DOSE NANOPARTICULATE COMPOSITIONS COMPRISING A SYNERGISTIC COMBINATION OF A
USA	Granted	6582803	10/075,445	US 2002-0110597 A1	15-Feb-2002	15-Jul-2002	21-Sep-2020	Akermes Pharma Ireland Limited	SOLID DOSE NANOPARTICULATE COMPOSITIONS COMPRISING A SYNERGISTIC COMBINATION OF A
USA	Granted	696829	10/345,512	US 2003-0108616 A1	16-Jan-2003	29-Nov-2005	21-Sep-2020	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS COMPRISING COPOLYMERS OF VINYL PYRROLIDONE AND VINYL METHODS OF MAKING NANOPARTICULATE DRUG COMPOSITIONS COMPRISING COPOLYMERS OF VINYL
USA	Granted	7244451	11/213,765	US 2007-0141159 A1	30-Aug-2007	17-Jul-2007	05-Feb-2021	Akermes Pharma Ireland Limited	APPARATUS FOR SANITARY WET MILLING
USA	Granted	6582285	09/842,619	US 2001-0053654 A1	26-Apr-2001	24-Jun-2003	26-Apr-2021	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF INSULIN
USA	APPEAL	10/246,751	US 2003-0059282 A1		19-Sep-2002	19-Sep-2022	Akermes Pharma Ireland Limited	SYSTEM AND METHOD FOR MILLING MATERIALS	
USA	Granted	6742734	10/162,233	US 2002-0173758 A1	04-Jun-2002	01-Jun-2004	06-Aug-2022	Akermes Pharma Ireland Limited	SYSTEM AND METHOD FOR MILLING MATERIALS
USA	Granted	6978847	10/732,801	US 2004-0164194 A1	11-Dec-2003	20-Dec-2005	04-Jun-2022	Akermes Pharma Ireland Limited	SYSTEM AND METHOD FOR MILLING MATERIALS
USA	Granted	7575184	11/833,645	US 2008-0025807 A1	03-Aug-2007	16-Aug-2009	04-Aug-2022	Akermes Pharma Ireland Limited	STABILIZATION OF CHEMICAL COMPOUNDS USING NANOPARTICULATE FORMULATIONS
USA	APPEAL	09/952,032	US 2003-0054042 A1		14-Sep-2001	14-Sep-2021	Akermes Pharma Ireland Limited	STABILIZATION OF CHEMICAL COMPOUNDS USING NANOPARTICULATE FORMULATIONS	
USA	APPEAL	11/802,158	US 2007-0224279 A1		21-May-2007	14-Sep-2021	Akermes Pharma Ireland Limited	STABILIZATION OF CHEMICAL COMPOUNDS USING NANOPARTICULATE FORMULATIONS	
USA	Pending	11/979,251			31-Oct-2007	14-Sep-2021	Akermes Pharma Ireland Limited	STABILIZATION OF CHEMICAL COMPOUNDS USING NANOPARTICULATE FORMULATIONS	
USA	Published	12/121,448	US 2009-0175851 A1		15-May-2008	14-Sep-2021	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF IMMUNOSUPPRESSIVE AGENTS	
USA	Granted	7459283	10/857,514	US 2003-0185689 A1	04-Feb-2003	02-Dec-2008	10-Jul-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS HAVING LYSOZYME AS A SURFACE STABILIZER
USA	Published	12/292,091	US 2009-0074675 A1		12-Nov-2006	04-Feb-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS HAVING LYSOZYME AS A SURFACE STABILIZER	
USA	APPEAL	11/275,089	US 2006-0183920 A1		07-Dec-2005	21-Sep-2020	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF MAP KINASE INHIBITORS	
USA	APPEAL	10/035,324	US 2003-0129242 A1		04-Jan-2002	04-Jan-2022	Akermes Pharma Ireland Limited	STERILE FILTERED NANOPARTICULATE FORMULATIONS OF BUDESONIDE AND BECLOMETHASONE	
USA	Granted	7713651	10/659,706	US 2005-0031691 A1	11-Sep-2003	11-May-2010	12-Nov-2024	Akermes Pharma Ireland Limited	GEL-STABILIZED NANOPARTICULATE ACTIVE AGENT COMPOSITIONS
USA	APPEAL	11/920,250	US 2008-0050461 A1		30-Oct-2007	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	APPEAL	11/928,278	US 2008-0107741 A1		30-Oct-2007	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	APPEAL	11/928,288	US 2008-0226732 A1		30-Oct-2007	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	Published	12/076,247	US 2008-0220075 A1		14-Mar-2008	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	Published	12/117,982	US 2008-0279949 A1		09-May-2008	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	Published	12/670,722	US 2010-0322652 A1		27-Aug-2012	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	Published	12/870,745	US 2010-0322653 A1		27-Aug-2012	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	Published	12/870,749	US 2010-0323976 A1		27-Aug-2012	20-Mar-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS OF ANGIOGENESIS INHIBITORS	
USA	Granted	7101576	10/412,669	US 2003-0213490 A1	14-Apr-2003	05-Sep-2007	12-Apr-2024	Akermes Pharma Ireland Limited	NANOPARTICULATE MEGESTROL FORMULATIONS
USA	Published	10/878,625	US 2005-0060701 A1		29-Jun-2004	14-Apr-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE MEGESTROL FORMULATIONS	
USA	APPEAL	11/083,149	US 2005-0233001 A1		30-Mar-2005	14-Apr-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE MEGESTROL FORMULATIONS	
USA	APPEAL	11/472,556	US 2010-0228939 A1		22-Jun-2006	14-Apr-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE MEGESTROL FORMULATIONS	
USA	Published	12/828,557	US 2010-0267051 A1		25-Jun-2010	14-Apr-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE MEGESTROL FORMULATIONS	
USA	Granted	7276249	10/444,086	US 2005-0278974 A1	23-May-2003	02-Oct-2007	21-Feb-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE FIBRATE FORMULATIONS
USA	Granted	7320802	10/692,556	US 2004-0058009 A1	27-Oct-2003	22-Jan-2008	21-Feb-2023	Akermes Pharma Ireland Limited	METHODS OF TREATMENT USING NANOPARTICULATE FENOXBUTEROL COMPOSITIONS
USA	APPEAL	11/710,607	US 2007-0264348 A1		26-Feb-2007	21-Feb-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE FIBRATE FORMULATIONS	
USA	Allowed	11/802,542	US 2007-0298115 A1		23-May-2007	21-Feb-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE FIBRATE FORMULATIONS	
USA	APPEAL	11/802,557	US 2008-0065851 A1		23-May-2007	21-Feb-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE FIBRATE FORMULATIONS	
USA	Published	11/879,230	US 2008-0133424 A1		31-Oct-2007	21-Feb-2023	API & Fournier	NANOPARTICULATE FIBRATE FORMULATIONS	
USA	Published	12/058,497	US 2008-0241070 A1		28-Mar-2008	21-Feb-2023	API & Fournier	NANOPARTICULATE FIBRATE FORMULATIONS	
USA	Published	11/367,716	US 2011-0227371 A1		06-Mar-2006	01-Oct-2018	Akermes Pharma Ireland Limited	NANOPARTICULATE STATIN FORMULATIONS & NOVEL STATIN COMBINATIONS	
USA	Granted	7,763,278 B2	10/457,811	US 2003-0232736 A1	10-Jun-2003	27-Jul-2010	03-Mar-2024	Akermes Pharma Ireland Limited	NANOPARTICULATE POLYCOSONOL FORMULATIONS AND NOVEL POLYCOSONOL COMBINATIONS
USA	Published	12/704,426	US 2010-0143952 A1		11-Feb-2010	10-Jun-2023	Akermes Pharma Ireland Limited	NANOPARTICULATE POLYCOSONOL FORMULATIONS AND NOVEL POLYCOSONOL COMBINATIONS	
USA	PENDING	10/784,500	US 2004-0229038 A1		24-Feb-2004	24-Feb-2024	Akermes Pharma Ireland Limited	NANOPARTICULATE MELOXICAM FORMULATIONS	
USA	Published	12/788,203	US 2010-0297252 A1		26-May-2010	24-Feb-2024	Akermes Pharma Ireland Limited	NANOPARTICULATE MELOXICAM FORMULATIONS	
USA	Published	10/705,227	US 2014-0156951 A1		12-Nov-2003	12-Nov-2023	Akermes Pharma Ireland Limited	SOLID DOSAGE FORMS COMPRISING PULLULAN	
USA	APPEAL	10/619,539	US 2004-0258757 A1		16-Jul-2003	16-Jul-2023	Akermes Pharma Ireland Limited	LIQUID DOSAGE COMPOSITIONS OF STABLE NANOPARTICULATE ACTIVE AGENTS	
USA	Pending	13/044,450			09-Mar-2011	16-Jul-2023	Akermes Pharma Ireland Limited	LIQUID DOSAGE COMPOSITIONS OF STABLE NANOPARTICULATE ACTIVE AGENTS	
USA	APPEAL	10/654,600	US 2004-0105778 A1		04-Sep-2003	04-Sep-2023	Akermes Pharma Ireland Limited	GAMMA IRRADIATION OF SOILD NANOPARTICULATE ACTIVE AGENTS	
USA	Granted	7,196,735 B2	10/323,736	US 2004-0023099 A1	20-Dec-2002	03-Apr-2007	07-Jan-2021	Akermes Pharma Ireland Limited	IN VITRO METHODS FOR EVALUATING THE IN VIVO EFFECTIVENESS OF DOSAGE FORMS OF
USA	Granted	7685739	11/650,412		06-Jan-2007	21-Sep-2020	Akermes Pharma Ireland Limited	IN VITRO METHODS FOR EVALUATING THE IN VIVO EFFECTIVENESS OF DOSAGE FORMS OF	
USA	Published	12/729,018	US 2010-0173648 A1		22-Mar-2010	21-Sep-2020	Akermes Pharma Ireland Limited	IN VITRO METHODS FOR EVALUATING THE IN VIVO EFFECTIVENESS OF DOSAGE FORMS OF	
USA	Granted	7390505	10/766,960	US 2014-0257558 A1	30-Jun-2004	24-Jun-2008	30-Jun-2024	Akermes Pharma Ireland Limited	NANOPARTICULATE TOPIRAMATE FORMULATIONS
USA	Pending	13/189,299			22-Jul-2001	2/2/2024	Akermes Pharma Ireland Limited	NOVEL FLUTICASONIDE FORMULATIONS	
USA	Published	10/420,927	US 2004-0105889 A1		23-Apr-2003	14-Apr-2023	Akermes Pharma Ireland Limited	LOW VISCOSITY LIQUID DOSAGE FORMS	
USA	APPEAL	11/979,253	US 2008-0152585 A1		31-Oct-2007	14-Apr-2023	Akermes Pharma Ireland Limited	LOW VISCOSITY LIQUID DOSAGE FORMS	
USA	Granted	7842232	10/851,661	US 2010-0255102 A1	24-May-2004	30-Nov-2010	29-Jun-2027	Akermes Pharma Ireland Limited	STERILIZATION OF DISPERSIONS OF NANOPARTICULATE ACTIVE AGENTS WITH GAMMA RADIATION
USA	APPEAL	10/895,405	US 2005-0142177 A1		21-Jul-2004	22-Jun-2015	Akermes Pharma Ireland Limited	NOVEL COMPOSITIONS OF SILENDAWELL FREE BASE	
USA	APPEAL	10/697,703	US 2004-0158672 A1		31-Oct-2003	NOVEL NIMESULIDE COMPOSITIONS			
USA	Pending	13/193,545			26-Jul-2011	5/18/2021	Akermes Pharma Ireland Limited	NOVEL NIMESULIDE COMPOSITIONS	
USA	Published	12/292,092	US 2009-0074873 A1		12-Nov-2008	24-Feb-2015	Akermes Pharma Ireland Limited	NANOPARTICULATE BECLOMETHASONE DIPROPIONATE COMPOSITIONS	
USA	APPEAL	10/697,716	US 2004-0141925 A1		31-Oct-2003	16-Jul-2023	Akermes Pharma Ireland Limited	NOVEL TRAMCINOLONE COMPOSITIONS	
USA	APPEAL	10/701,064	US 2005-0019412 A1		05-Nov-2002	Alkermes Pharma Ireland Limited	NOVEL GLIPIZIDE COMPOSITIONS		
USA	Published	10/712,259			22-Nov-2003	22-Jun-2015	Akermes Pharma Ireland Limited	NOVEL NIFEDIPINE COMPOSITIONS	
USA	Published	11/980,720	US 2009-0147209 A1		31-Oct-2007	22-Jun-2015	Akermes Pharma Ireland Limited	NOVEL NIFEDIPINE COMPOSITIONS	
USA	Published	12/292,395	US 2009-0104273 A1		18-Nov-2008	22-Jun-2015	Akermes Pharma Ireland Limited	NOVEL NIFEDIPINE COMPOSITIONS	
USA	Published	10/677,857	US 2004-0105661 A1		05-Oct-2003	Alkermes Pharma Ireland Limited	NOVEL BENZOYL PEROXIDE COMPOSITIONS		
USA	Granted	7879360	10/978,695	US 2005-0238725 A1	02-Nov-2004	01-Feb-2011	20-Feb-2028	Akermes Pharma Ireland Limited	NANOPARTICULATE COMPOSITIONS HAVING A PEPTIDE AS A SURFACE STABILIZER
USA	Published	10/979,792	US 2005-0147664 A1		03-Nov-2004	03-Nov-2024	Akermes Pharma Ireland Limited	COMPOSITIONS COMPRISING ANTIBODIES AND METHODS OF USING THE SAME FOR TARGETED	
USA	Granted	7910577	11/274,887	US 2006-0154918 A1	16-Nov-2005	23-Mar-2011	26-Jan-2025	Akermes Pharma Ireland Limited	INJECTABLE FORMULATIONS OF NANOPARTICULATE OLANZAPINE
USA	Pending	12/933,233			12-Nov-2008	16-Nov-2025	Akermes Pharma Ireland Limited	INANOPARTICULATE FORMULATIONS OF OLANZAPINE ESTERS	
USA	Pending	13/024,315			08-Feb-2011	16-Nov-2025	Akermes Pharma Ireland Limited	INANOPARTICULATE FORMULATIONS OF OLANZAPINE ESTERS	

\* Recordation in the relevant patent office(s) or reissue; ownership interest held by Akermes Pharma Ireland Limited will occur after Close.

Country	Status	Patent Number	Application Number	Publication Number	Filing Date	Issue / Grant Date	Normal Expiry Date	Owner	Short Title / Subject Matter
USA	APPEAL	12/232,896	US 2009-0035366 A1	25-Sep-2008				Akermes Pharma Ireland Limited	NANOPARTICULATE BENZOTIOPHENE FORMULATIONS
USA	Pending	11/633,098			04-Dec-2006	04-Dec-2026	Akermes Pharma Ireland Limited	NOVEL MCETASONE COMPOSITIONS AND METHODS OF MAKING AND USING THE SAME	
USA	APPEAL	11/377,650	US 2006-0210639 A1	17-Mar-2006		17-Mar-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE BIS-(CSP)-ONATE COMPOSITIONS	
USA	Published	11/376,554	US 2006-0210638 A1	16-Mar-2006		16-Mar-2026	Akermes Pharma Ireland Limited	INJECTABLE COMPOSITIONS OF NANOPARTICULATE IMMUNOSUPPRESSIVE COMPOUNDS	
USA	Published	11/387,688	US 2006-0216353 A1	23-Mar-2006		23-Mar-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE CORTICOSTEROID AND ANTIHISTAMINE FORMULATIONS	
USA	APPEAL	11/402,264			12-Apr-2008	12-Apr-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE QUINAZOLINE DERIVATIVE FORMULATIONS	
USA	APPEAL	11/402,257	US 2006-0248141 A1	12-Apr-2008		12-Apr-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE LIPOSE INHIBITOR FORMULATIONS	
USA	APPEAL	11/436,887			19-May-2006	19-May-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE INTEGRIN ANTAGONIST FORMULATIONS	
USA	APPEAL	11/980,719			31-Oct-2007	19-May-2028	Akermes Pharma Ireland Limited	NANOPARTICULATE INTEGRIN ANTAGONIST FORMULATIONS	
USA	APPEAL	11/437,838	US 2010-0023478 A1	22-May-2006		22-May-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE STABILIZED ANTI-HYPERTENSIVE COMPOSITIONS	
USA	Published	12/052,436	US 2008-0220074 A1	20-Mar-2008		04-Sep-2028	Akermes Pharma Ireland Limited	GAMMA RADIATION STERILIZED NANOPARTICULATE DOCTETAXEL COMPOSITIONS AND METHOD OF	
USA	APPEAL	11/363,266	US 2007-0202190 A1	28-Feb-2006		28-Feb-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE CARVEDILOL FORMULATIONS	
USA	Published	11/257,775	US 2007-0173051 A1	27-Jan-2006			Akermes Pharma Ireland Limited	STERILIZED NANOPARTICULATE GLUCOCORTICOID FORMULATIONS	
USA	Published	12/071,849	US 2008-0152720 A1	27-Feb-2008		15-Dec-2025	Akermes Pharma Ireland Limited	NANOPARTICULATE TACROLIMUS FORMULATIONS	
USA	Published	12/484,673	US 2009-0252806 A1	12-Jun-2009		15-Dec-2025	Akermes Pharma Ireland Limited	NANOPARTICULATE TACROLIMUS FORMULATIONS	
USA	Pending	13/039,249			02-Mar-2011	21-Dec-2025	Akermes Pharma Ireland Limited	NANOPARTICULATE BICALUTAMIDE FORMULATIONS	
USA	APPEAL	11/361,055	US 2006-0188566 A1	24-Feb-2006		24-Feb-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE FORMULATIONS OF DOCTETAXEL AND ANALOGUES THEREOF	
USA	Published	11/354,249	US 2006-0188986 A1	15-Feb-2006			Akermes Pharma Ireland Limited	AEROSOL AND INJECTABLE FORMULATIONS OF NANOPARTICULATE BENZODIAZEPINE	
USA	Published	12/544,197	US 2009-0304801 A1	19-Aug-2009		15-Feb-2026	Akermes Pharma Ireland Limited	AEROSOL AND INJECTABLE FORMULATIONS OF NANOPARTICULATE BENZODIAZEPINE	
USA	Published	11/325,826	US 2006-0165806 A1	05-Jan-2006			Akermes Pharma Ireland Limited	NANOPARTICULATE CANDESARTAN FORMULATIONS	
USA	APPEAL	11/372,227	US 2006-0204588 A1	10-Mar-2006		10-Mar-2026	Akermes Pharma Ireland Limited	FORMULATIONS OF A NANOPARTICULATE FINASTERIDE, DUTASTERIDE OR TAMSU-OSIN	
USA	APPEAL	11/446,589	US 2007-0042049 A1	05-Jun-2006		05-Jun-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE BENIDIPINE COMPOSITIONS	
USA	APPEAL	11/446,594	US 2006-0282214 A1	05-Jun-2006		05-Jun-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE ACETAMINOPHEN FORMULATIONS	
USA	Published	11/446,585	US 2006-0275372 A1	05-Jun-2006		05-Jun-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE IMATING MESYLATE FORMULATIONS	
USA	APPEAL	11/448,594	US 2007-0053071 A1	06-Jun-2006		06-Jun-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE EBASTINE FORMULATIONS	
USA	Pending	11/802,427			22-May-2007	22-May-2027	Akermes Pharma Ireland Limited	NANOPARTICULATE POSACONAZOLE FORMULATIONS	
USA	APPEAL	11/481,257			06-Jul-2006		06-Jul-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE CAFIT-IROMYCIN FORMULATIONS
USA	Published	11/520,059	US 2007-0104792 A1	13-Sep-2006		13-Sep-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE Tadalafil FORMULATIONS	
USA	Published	11/520,058	US 2007-0148100 A1	13-Sep-2006		13-Sep-2026	Akermes Pharma Ireland Limited	INJECTABLE FORMULATIONS OF NANOPARTICULATE ARIPIPRAZOLE	
USA	Pending	11/761,900			12-Jun-2007		12-Jun-2027	Akermes Pharma Ireland Limited	NANOPARTICULATE KINASE INHIBITOR FORMULATIONS
USA	APPEAL	11/775,002	US 2008-0213374 A1	09-Jul-2007		09-Jul-2027	Akermes Pharma Ireland Limited	NANOPARTICULATE FORMULATIONS OF SORAFENIB TOSYLATE	
USA	Pending	11/129,807			16-May-2005		16-May-2025	Akermes Pharma Ireland Limited	NANOPARTICLE DISPERSION CONTAINING LACTAM COMPOUND
USA	Pending	12/331,052			09-Dec-2008		09-Dec-2028	Akermes Pharma Ireland Limited	NANOPARTICULATE AND DILUFUNGIN COMPOSITIONS AND METHODS FOR MAKING THE SAME
USA	Published	12/329,566	2009-0311335 A1	24-Feb-2009		24-Feb-2029	Akermes Pharma Ireland Limited	COMBINATION OF A TRIPATAN AND AN NSAID	
USA	Pending	13/110,647			18-May-2001		18-May-2031	Akermes Pharma Ireland Limited	NANOPARTICULATE CINACALCE COMPOSITIONS
USA	APPEAL	11/262,672			31-Oct-2005		31-Oct-2025	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING A COMBINATION OF ISOSORBIDE DINITRATE AND
USA	Published	11/373,629	US 2007-0083791 A1	10-Mar-2006		31-Oct-2025	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING A COMBINATION OF ISOSORBIDE DINITRATE AND	
USA	Published	11/569,493	US 2008-0269043 A1	01-Feb-2008		28-Jan-2026	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING AN ANTIPSYCHOTIC AGENT	
USA	Published	11/329,593	US 2006-0269596 A1	11-Jan-2006		11-Jan-2026	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING AN ACYANILIDE	
USA	Pending	11/568,841			29-Jun-2007		14-Feb-2026	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING LEVETIRACETAM
USA	Pending	11/571,379			12-Apr-2008		12-Apr-2026	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING A CEPHALOSPORIN FOR THE TREATMENT OF A
USA	APPEAL	11/568,202	US 2007-0122481 A1	09-Nov-2006		01-Nov-2019	Akermes Pharma Ireland Limited	MODIFIED RELEASE COMPOSITIONS COMPRISING A 5-FUOROCYTIDINE DERIVATIVE FOR THE TREATMENT	
USA	Pending	11/568,925			16-Nov-2006		01-Nov-2019	Akermes Pharma Ireland Limited	MODIFIED RELEASE LOXOPENIN COMPOSITIONS
USA	Published	11/422,226	US 2008-0118856 A1	05-Jun-2006		01-Nov-2019	Akermes Pharma Ireland Limited	MODIFIED RELEASE OF COMPOSITIONS CONTAINING A COMBINATION OF CARBIDOPA, LEVODOPA AND	
USA	Granted	5505962	08/307,392		16-Sep-1994	09-Apr-1996	09-Apr-2013	Akermes Pharma Ireland Limited	CONTROLLED RELEASE PHARMACEUTICAL FORMULATION
USA	Granted	5547145	08/479,509		07-Jun-1995	24-Jun-1997	07-Jun-2015	Akermes Pharma Ireland Limited	CONTROLLED RELEASE BIODEGRADABLE MICRO- AND NANOSPHERES CONTAINING CYCLOSPORIN
USA	Granted	5364620	07/921,459		28-Jul-1992	15-Nov-1994	15-Nov-2011	Akermes Pharma Ireland Limited	CONTROLLED ABSORPTION DILTIAZEM FORMULATION FOR ONCE-DAILY ADMINISTRATION
USA	Granted	5616345	08/334,464		04-Nov-1994	01-Apr-1997	01-Apr-2014	Akermes Pharma Ireland Limited	CONTROLLED ABSORPTION DILTIAZEM FORMULATION FOR ONCE-DAILY ADMINISTRATION
USA	Granted	5336504	08/064,401		19-May-1993	09-Aug-1994	22-Jul-2012	Akermes Pharma Ireland Limited	DILTIAZEM FORMULATION AND METHODS OF TREATMENT
USA	Licensed	5370879	08/073,651		07-Jun-1993	06-Dec-1994	06-Dec-2011	Akermes Pharma Ireland Limited	FORMULATIONS AND THEIR USE IN THE TREATMENT OF NEUROLOGICAL DISEASES
USA	Licensed	5540638	08/328,165		24-Oct-1994	30-Jul-1995	30-Jul-2013	Akermes Pharma Ireland Limited	FORMULATIONS AND THEIR USE IN THE TREATMENT OF NEUROLOGICAL DISEASES
USA	Licensed	5580580	08/479,506		07-Jun-1995	03-Dec-1996	03-Dec-2013	Akermes Pharma Ireland Limited	FORMULATIONS AND THEIR USE IN THE TREATMENT OF NEUROLOGICAL DISEASES
USA	Licensed	5533935	08/244,094		13-May-1994	09-Jul-1995	09-Jul-2013	Akermes Pharma Ireland Limited	PASSIVE TRANSDERMAL DEVICE WITH CONTROLLED DRUG DELIVERY
USA	Licensed	6065339	08/977,995		25-Nov-1997	23-May-2000	25-Nov-2017	Akermes Pharma Ireland Limited	ORAL-MORPHINE MULTIPARTICULATE FORMULATION
USA	Licensed	6223998	09/566,636		08-May-2000	08-May-2001	01-Nov-2019	Akermes Pharma Ireland Limited	MULTIPARTICULATE MODIFIED RELEASE COMPOSITION
USA	Licensed	6730225	09/861,425	US 2002-0054907 A1	07-May-2001	04-May-2004	01-Nov-2019	Akermes Pharma Ireland Limited	MULTIPARTICULATE MODIFIED RELEASE COMPOSITION (METHYHPHENIDATE)
USA	Licensed	6902742	10/331,754	US 2003-0123237 A1	30-Dec-2002	07-Jun-2005	01-Nov-2019	Akermes Pharma Ireland Limited	MULTIPARTICULATE MODIFIED RELEASE COMPOSITION (METHYHPHENIDATE)
USA	Licensed	6793936	10/354,483	US 2003-0170304 A1	30-Jan-2003	21-Sep-2004	01-Nov-2019	Akermes Pharma Ireland Limited	MULTIPARTICULATE MODIFIED RELEASE COMPOSITION (METHYHPHENIDATE)
USA	APPEAL	10/827,689	US 2004-0197405 A1	15-Apr-2004		01-Nov-2019	Akermes Pharma Ireland Limited	MULTIPARTICULATE MODIFIED RELEASE COMPOSITION (METHYHPHENIDATE)	
USA	Published	11/372,657	US 2006-0240105 A1	10-Mar-2006		01-Nov-2019	Akermes Pharma Ireland Limited	MULTIPARTICULATE MODIFIED RELEASE COMPOSITION (METHYHPHENIDATE)	
USA	Granted	7465462	09/744,161		15-Apr-2001	16-Dec-2008	10-May-2020	Akermes Pharma Ireland Limited	MULTIPARTICULATE CONTROLLED RELEASE SELECTIVE SEROTONIN REUPTAKE INHIBITOR FORMULATIONS
USA	Granted	7021163	10/492,198	US 2005-0003550 A1	08-Apr-2004	04-Apr-2006	09-Oct-2022	Akermes Pharma Ireland Limited	APPARATUS AND METHOD FOR CONCURRENTLY MONITORING ACTIVE RELEASE AND PHYSICAL
USA	Pending	12/626,001	US 2010-0272807		25-Nov-2005			Akermes Pharma Ireland Limited	SUSTAINED RELEASE AMINOPYRIDINE COMPOSITIONS
USA	Pending	12/626,095	US 2010-0272796		25-Nov-2005			Akermes Pharma Ireland Limited	SUSTAINED RELEASE AMINOPYRIDINE COMPOSITIONS
USA	Pending	12/626,036	US 2010-0272795		25-Nov-2005			Akermes Pharma Ireland Limited	SUSTAINED RELEASE AMINOPYRIDINE COMPOSITIONS
USA	Published	11/568,891	US 2010-0136106 A1	15-Jan-2010		07-Jun-2026	Akermes Pharma Ireland Limited	MODIFIED RELEASE FAMOTICLOPRIDE COMPOSITIONS	
USA	Published	11/569,481	US 2009-0297597 A1	21-Nov-2006			Akermes Pharma Ireland Limited	MODIFIED RELEASE TICLOPRIDE COMPOSITIONS	
USA	Pending	13/044,225			09-Mar-2011			Akermes Pharma Ireland Limited	ALCOHOL RESISTANT ENTERIC PHARMACEUTICAL COMPOSITIONS
United States	Granted	US 5,841,745	08/479,509			2-Apr-2016	Akermes Pharma Ireland Limited	CR BIODEGRADABLE MICRO- AND NANOSPHERES CONTAINING CYCLOSPORIN	
USA	Granted	6908626	10/268,928	US 2003-0137067 A1	11-Oct-2002	21-Jun-2005	25-Dec-2022	Akermes Pharma Ireland Limited	COMPOSITIONS HAVING A COMBINATION OF IMMEDIATE RELEASE AND CONTROLLED RELEASE
USA	Pending	12/407,684			19-Mar-2009		19-Mar-2029	Akermes Pharma Ireland Limited	COMPOSITIONS FOR SITE-SPECIFIC DELIVERY OF IMATINIB MESYLATE AND METHODS OF USE
USA	Published	11/297,737	US 2006-0121112 A1	08-Dec-2005		08-Dec-2025	Akermes Pharma Ireland Limited	TOPIRAMATE PHARMACEUTICAL COMPOSITION	
USA	Pending	11/571,377			14-Jun-2008		02-Mar-2026	Akermes Pharma Ireland Limited	CONTROLLED RELEASE COMPOSITIONS COMPRISING HETEROCYCLIC AMIDE DERIVATIVE
USA	Pending	11/566,698			03-Nov-2006		13-Apr-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING PROSTAGLANDIN
USA	Pending	11/569,206			16-Nov-2006		09-May-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING VITAMIN A2
USA	Published	11/566,825	US 2009-0263400 A1	11-May-2009		16-May-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING A CEPHALOSPORIN	
USA	Published	11/568,635	US 2009-0297536 A1	23-May-2006		23-May-2026	Akermes Pharma Ireland Limited	NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING A PLATELET	
USA	Granted	5641515	08/474,161		07-Jun-1995	24-Jun-1997	07-Jun-2015	Akermes Pharma Ireland Limited	CONTROLLED RELEASE BIODEGRADABLE NANOPARTICLES CONTAINING INSULIN
USA	Pending	11/671,276			06-Feb-2007		06-Feb-2027	Akermes Pharma Ireland Limited	NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING CEFIDOPRIL
USA	Published	11/672,263	US 2011-0008435 A1	07-Feb-2007			Akermes Pharma Ireland Limited	NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING ARYL-HETEROCYCLIC	

Country	Status	Patent Number	Application Number	Publication Number	Filing Date	Issue / Grant Date	Normal Expiry Date	Owner	Short Title / Subject Matter
USA	Published	11/479,013	US 2010-0247636 A1	30-Jun-2006		30-Jun-2026	Akermes Pharma Ireland Limited		NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING NILVADIPINE
USA	Published	11/776,770	US 2009-0317843 A1	12-Jul-2007		12-Jul-2027	Akermes Pharma Ireland Limited		NANOPARTICULATE FORMULATIONS OF MODAFINIL
USA	Published	12/049,046	US 2009-0226734 A1	14-Mar-2008		14-Mar-2028	Akermes Pharma Ireland Limited		COMBINATION OF A NARCOTIC AND NON-NARCOTIC ANALGESIC
USA	Published	11/768,154	US 2008-0113025 A1	25-Jun-2007		25-Jun-2027	Akermes Pharma Ireland Limited		COMPOSITIONS COMPRISING NANOPARTICULATE NAFTROXEN AND CONTROLLED RELEASE
USA	Published	11/768,169	US 2008-0102121 A1	25-Jun-2007		25-Jun-2027	Akermes Pharma Ireland Limited		COMPOSITIONS COMPRISING NANOPARTICULATE MELOXICAM AND CONTROLLED RELEASE CAP ASSEMBLY
USA	Granted	5332113	07/758,364		10-Sep-1991	26-Sep-1994	26-Sep-2011	Akermes Pharma Ireland Limited	ABUSE-RESISTANT PHARMACEUTICAL COMPOSITIONS
USA	Published	10/528,727	US 2006-0104909 A1	05-Dec-2005		23-Sep-2023	APII & VERION INC		DRUG DELIVERY COMPOSITION (NANO OSMOTIC PUMP)
USA	Pending	12/757,005			06-Apr-2010			Akermes Pharma Ireland Limited	CONTROLLED RELEASE COZAPINE COMPOSITIONS
USA	Pending	12/757,024			06-Apr-2010			Akermes Pharma Ireland Limited	DOSING REGIMEN
USA	Published	12/209,728	2006-0149479 A1	12-Sep-2008		12-Sep-2028	Akermes Pharma Ireland Limited		STABLE LIQUID FORMULATIONS OF ANTI-INFECTIVE AGENTS AND ADJUSTED ANTI-INFECTIVE AGENT
USA	Pending	12/897,924			04-Mar-2009		04-Mar-2029	Akermes Pharma Ireland Limited	REDUCTION OF FLAKE-LIKE AGGREGATION IN NANOPARTICULATE ACTIVE AGENT COMPOSITIONS
USA	Published	12/788,196	US 2010-0316725 A1	25-May-2010		26-May-2030	Akermes Pharma Ireland Limited		TRANSDERMAL DRUG DELIVERY DEVICE
USA	Granted	5242406	07/809,195		16-Dec-1991	07-Sep-1993	16-Dec-2011	Akermes Pharma Ireland Limited	TRANSLUCENT DRUG DELIVERY APPLICATOR
USA	Granted	5356632	07/759,106		12-Sep-1991	18-Oct-1994	18-Oct-2011	Akermes Pharma Ireland Limited	Liquid delivery pumping device
USA	Granted	5380272	08/077,146		16-Jun-1993	10-Jan-1995	16-Jun-2013	Akermes Pharma Ireland Limited	DEVICE FOR GENERATING A PULSE-LIKE FLUID DRUG FLOW
United States	Granted	US 5871125	08/697,692			5-Sep-2016	Akermes Pharma Ireland Limited		IMPROVED ELECTRODE AND IONTOPHORETIC DEVICE AND METHOD
USA	Granted	6312409	09/331,648		07-Sep-1998	06-Nov-2001	07-Sep-2019	Akermes Pharma Ireland Limited	DEVICE FOR THE DELIVERY OF A SUBSTANCE TO A SUBJECT AND IMPROVED ELECTRODE ASSEMBLY.
USA	Granted	6078642	997404		23-Dec-1997	20-Jun-2000	23-Dec-2017	Akermes Pharma Ireland Limited	DRUG DEIVERY DEVICE
USA	Granted	6157538	08/997,388		23-Dec-1997	05-Dec-2000	23-Dec-2017	Akermes Pharma Ireland Limited	DRUG RECONSTITUTION AND INJECTION DEVICE
USA	Granted	6317630	09/239,534		29-Jun-1998	13-Nov-2001	29-Jun-2018	Akermes Pharma Ireland Limited	SPIKE FOR LIQUID TRANSFER DEVICE, LIQUID TRANSFER DEVICE INCLUDING SPIKE AND METHOD OF
USA	Granted	D454,194 S	29135,976		25-Jan-2001	06-Mar-2002	05-Mar-2016	Akermes Pharma Ireland Limited	INTRADERMAL DRUG DELIVERY DEVICE
USA	Granted	6719719	09/865,539	US 2002-0004643 A1	23-May-2001	13-Apr-2004	23-May-2021	Akermes Pharma Ireland Limited	INTRADERMAL DRUG DELIVERY DEVICE AND METHOD
USA	Licensed	5527288	08183,482		18-Jun-1994	18-Jun-1996	18-Jun-2014	Akermes Pharma Ireland Limited	MEDICAMENT DELIVERY DEVICE
USA	Licensed	5957501	08/647,954		19-Aug-1998	07-Dec-1999	07-Dec-2016	Akermes Pharma Ireland Limited	CARTRIDGE-BASED DRUG DELIVERY DEVICE
USA	Licensed	5814120	08/708,230		08-Sep-1996	29-Sep-1998	06-Sep-2016	Akermes Pharma Ireland Limited	NEEDLE FOR SUBCUTANEOUS DELIVERY OF FLUIDS
USA	Licensed	5958001	08/763,311		10-Dec-1996	12-Jan-1999	10-Dec-2018	Akermes Pharma Ireland Limited	NEEDLE AND METHOD FOR DELIVERY OF FLUIDS
USA	Licensed	6261272	09/202,176		01-Jun-1999	17-Jul-2001	04-Jun-2017	Akermes Pharma Ireland Limited	SUBCUTANEOUS DRUG DELIVERY DEVICE
USA	Licensed	6346196	09/778,632		06-Feb-2001	12-Feb-2002	04-Jun-2017	Akermes Pharma Ireland Limited	SUBCUTANEOUS DRUG DELIVERY DEVICE WITH IMPROVED FILLING SYSTEM
USA	Licensed	6530800	09/577,033		23-May-2008	11-Mar-2003	05-May-2018	Akermes Pharma Ireland Limited	SUBCUTANEOUS DRUG DELIVERY DEVICE WITH IMPROVED FILLING SYSTEM
USA	Licensed	6169582	09/072,875		05-May-1998	18-Feb-2001	05-May-2018	Akermes Pharma Ireland Limited	PRE-FILLED DRUG DELIVERY DEVICE AND METHOD OF MANUFACTURE AND ASSEMBLY OF SAME
USA	Licensed	6501519	09/103,716		23-Jun-1998	31-Dec-2002	12-Feb-2012	Akermes Pharma Ireland Limited	PRE-FILLED DRUG DELIVERY DEVICE AND METHOD OF MANUFACTURE AND ASSEMBLY OF SAME
USA	Licensed	6824529	09/836,105	US 2002-0010423 A1	17-Apr-2001	30-Nov-2004	17-Apr-2021	Akermes Pharma Ireland Limited	PRE-FILLED DRUG-DELIVERY DEVICE AND METHOD OF MANUFACTURE AND ASSEMBLY OF SAME
USA	Licensed	6843782	09/838,594	US 2001-025158 A1	18-Apr-2001	18-Apr-2005	07-Oct-2018	Akermes Pharma Ireland Limited	PRE-FILLED DRUG-DELIVERY DEVICE AND METHOD OF MANUFACTURE AND ASSEMBLY OF SAME
USA	Licensed	6275717	09/102,840		25-Jun-1998	14-Aug-2001	23-Jun-2018	Akermes Pharma Ireland Limited	METHODS OF CALIBRATING AND TESTING A SENSOR FOR IN VIVO MEASUREMENT OF AN ANALYTE AND
USA	Licensed	6000468	09/102,841		25-Jun-1998	14-Dec-1999	23-Jun-2018	Akermes Pharma Ireland Limited	DRUG DELIVERY KIT AND METHOD OF PACKAGING THE SAME
USA	Licensed	6857070	09/315,629	US 2001-0058282 A1	20-May-1999	01-Jul-2003	20-May-2019	Akermes Pharma Ireland Limited	IMPROVED ADHESIVE SYSTEM FOR MEDICAL DEVICES
USA	Licensed	6959556	09/275,464		23-Mar-1998	22-Jul-2003	23-Mar-2019	Akermes Pharma Ireland Limited	IMPROVED DRUG DELIVERY DEVICE
USA	Licensed	7384413	10/461,040	US 2003-0234948 A1	15-Jun-2003	10-Jun-2008	23-Mar-2019	Akermes Pharma Ireland Limited	DEVICE FOR MEASURING VOLUME OF DRUG
USA	Licensed	12/121,545			15-May-2008		23-Mar-2019	Akermes Pharma Ireland Limited	IMPROVED DRUG DELIVERY DEVICE
USA	Licensed	13/181,479			15-Jul-2011			Akermes Pharma Ireland Limited	IMPROVED DRUG DELIVERY DEVICE
USA	Licensed	13/184,473			15-Jul-2011			Akermes Pharma Ireland Limited	IMPROVED DRUG DELIVERY DEVICE
USA	Licensed	6520841	09/415,961		12-Oct-1999	16-Feb-2003	12-Oct-2019	Akermes Pharma Ireland Limited	METHOD AND DEVICE FOR ENTRAPPING GAS WITHIN A LIQUID DRUG CONTAINER
USA	Licensed	750964	09/883,025		17-Jun-2001	12-May-2003	03-Oct-2023	Akermes Pharma Ireland Limited	NEEDLE DEVICE AND METHOD AND OPERATION THEREOF
USA	Licensed	6572740	08/832,179	27068	11-Apr-2001	03-Jun-2003	11-Apr-2021	Akermes Pharma Ireland Limited	ELECTROLYtic CELL
USA	Granted	6790507	07/923,182		13-Mar-1989	06-Jul-2004	06-Jul-2021	Akermes Pharma Ireland Limited	METHODS AND COMPOSITIONS USING LIPOSOME-ENCAPSULATED NON-STEROIDAL ANTI-INFLAMMATORY
USA	Granted	5948441	08/367,923		03-Jun-1995	07-Sep-1999	07-Sep-2018	Akermes Pharma Ireland Limited	METHOD FOR SIZE SEPARATION OF PARTICLES
USA	Granted	5826673	08/442,080		16-May-1995	16-May-1997	16-May-2015	Akermes Pharma Ireland Limited	NOVEL EMULSIONS
USA	Granted	5525232	08/137,371		14-Oct-1998	11-Jun-1996	14-Oct-2013	Akermes Pharma Ireland Limited	METHOD FOR ENTRAPMENT OF CATIONIC SPECIES IN LAMELLAR VESICLES
USA	Granted	5716526	08/569,669		12-Feb-1996	10-Feb-1998	12-Feb-2016	Akermes Pharma Ireland Limited	METHOD OF SEPARATING MATERIALS FROM LIPOSOMES OR JELLY COMPLEXES
USA	Granted	5662930	08/433,665		04-May-1995	02-Sep-1997	04-May-2015	Akermes Pharma Ireland Limited	REDUCTION OF LIPOSOME INDUCED ADVERSE PHYSIOLOGICAL REACTIONS
USA	Granted	5614214	08/247,058		20-May-1994	25-Mar-1997	20-May-2014	Akermes Pharma Ireland Limited	REDUCTION OF LIPOSOME INDUCED ADVERSE PHYSIOLOGICAL REACTIONS
USA	Granted	5,591,123	08/381,141			07-Jan-2014	Akermes Pharma Ireland Limited	Programmable control mounting system for transdermal drug applicator	
USA	Granted	5,383,483	07/949,721			25-Oct-2011	Akermes Pharma Ireland Limited	Disposable transdermal drug applicator	
USA	Granted	5,372,579	08/204,784			13-Dec-2011	Akermes Pharma Ireland Limited	Pulsating transdermal drug delivery system	

**SCHEDULE B**

# Alkermes Irish Patent Schedule

September 2011

*Case #:* 000166.0051

*Title:* MICROENCAPSULATED 3-PIPERIDINYL-SUBSTITUTED 1,2-BENZISOXAZOLES AND 1,2-BENZISOTIAZOLES

*Owner:* ALKERMES, INC. and JANSSEN PHARMACEUTICA

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland		EPO	Granted	95900721.2	11-Nov-1994	0729357	2-Feb-2005	11-Nov-2014

*Case #:* 000166.0053

*Title:* PREPARATION OF BIODEGRADABLE MICROPARTICLES CONTAINING A BIOLOGICALLY ACTIVE AGENT

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent#	Issue Date	Expiration Date
Ireland	02	PCT	Granted	95 901 961.3	18-Nov-1994	0729353	06-Feb-2002	18-Nov-2014

*Case #:* 000166.0063

*Title:* PREPARATION OF EXTENDED SHELF-LIFE BIODEGRADABLE, BIOCOMPATIBLE MICROPARTICLES CONTAINING A BIOLOGICALLY ACTIVE AGENT

*Owner:* ALKERMES, INC. and JANSSEN PHARMACEUTICA

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland		EPO/DIV	Granted	02075905.6	06-May-1997	1210942	21-Mar-2007	6-May-2017
Ireland		EPO	Granted	97923063.8	06-May-1997	0904063	4-Sep-2002	6-May-2017

*Case #:* 000166.0070

*Title:* METHOD FOR PREPARING MICROPARTICLES HAVING A SELECTED RELEASE PROFILE

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland	00	EPP	Granted	99965212.6	10-Dec-1999	1140029	09-Nov-2005	10-Dec-2019

# Alkermes Irish Patent Schedule

## September 2011

*Case #:* 000166.0073

*Title:* PREPARATION OF INJECTABLE SUSPENSIONS HAVING IMPROVED INJECTABILITY

*Owner:* ALKERMES PHARMA IRELAND LIMITED AND ALKERMES CONTROLLED THERAPEUTICS, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland	00	EPP	Granted	01928628.5	19-Apr-2001	1283699	06-Jun-2007	19-Apr-2021

*Case #:* 000166.0075

*Title:* APPARATUS AND METHOD FOR PREPARING MICROPARTICLES

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland	00	EPP	Granted	00991722.0	03-Nov-2000	1231898	27-Dec-2006	03-Nov-2020

*Case #:* 000166.0077

*Title:* PROCESS FOR ADJUSTING POLYMER MOLECULAR WEIGHT POLYMER MICROPARTICLES

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland	00	EPP	Granted	01928630.1	19-Apr-2001	1282404	02-Jul-2008	19-Apr-2021

# Alkermes Irish Patent Schedule

September 2011

*Case #:* 000166.0098

*Title:* APPARATUS AND METHOD FOR PREPARING MICROPARTICLES USING IN-LINE SOLVENT EXTRACTION

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland	00	EPP	Granted	00990484.8	03-Nov-2000	1242053	12-Jan-2005	03-Nov-2020

*Case #:* 4000.3005

*Title:* Methods for Administering Aripiprazole

*Owner:* ALKERMES, INC.

Country	Sub Case	Case Type	Status	Application #	Filing Date	Patent #	Issue Date	Expiration Date
Ireland		EPP	Granted	04779411.0	29-Jul-2004	1660037	31-Aug-2011	29-Jul-2024